

IN THE CLAIMS:

The following listing of the claims replaces all previous listings of the claims and represents the claims Applicant currently wishes to be prosecuted.

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1. [CURRENTLY AMENDED] Insulated Metal Substrate (IMS) Control device for supplying an electric motor with ~~IMS technology or the like, characterised in that it provides~~comprising:
~~an two phase or three phase inverter of at least two phases;~~
an IMS metal path on at least two ~~of the at least two phases a metal path being provided~~
~~obtained in IMS technology on the inverter power circuit and each one in series~~
with a motor phase;
a thermal sensor in thermal communication with ~~for at least one of said the metal paths~~
~~preferably but not necessarily placed on the metal path itself to perform the~~
~~measure of its the temperature of the metal path that will also be used for~~
~~measuring and a temperature of the power transistors temperature of the control~~
device.

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2. [CURRENTLY AMENDED] Insulated Metal Substrate (IMS) Control device for supplying an electric motor with ~~IMS technology or the like, characterised in that it provides~~comprising:
a DC controller;
~~equipped with a metal path of the controller formed obtained in IMS technology on the a~~
controller card and in series with ~~the a~~ motor armature;
a thermal sensor ~~preferably but not necessarily placed on~~ in thermal communication with the
metal path to perform the measure of its temperature ~~that will also be used for~~
~~measuring the power transistors temperature.~~

3. [CURRENTLY AMENDED] Insulated Metal Substrate (IMS) Control device for supplying power to any electric motor realised in IMS technology or the like, characterised in that it provides
comprising:
an integrated power module; ~~equipped with~~
at least one metal path in series with ~~the at least one of~~ power devices ~~or with~~ and an external
connection terminal;

a thermal sensor ~~preferably but not necessarily placed on~~ in thermal communication with the
metal path to ~~perform the measure of its temperature that will also be used for~~
~~measuring the power transistors temperature.~~

4. [CURRENTLY AMENDED] Process for measuring the phase currents of an electric motor
power supply inverter or a DC controller for supplying electric motors characterised in that it provides
for comprising:

~~-measuring the temperature of at least one~~ Insulated Metal Substrate (IMS) metal path ~~realised~~
~~in IMS technology (or the like) as elongation of a connection path between power~~
~~or adduction devices towards outside and for;~~
~~compensating for a~~ the voltage drop due to thermal drift of the metal path's resistivity
~~through software computation; and then thereby~~
having the exact phase current measure.

5. [CURRENTLY AMENDED] Process according to claim 4 ~~characterised in that it~~
~~provides further comprising for~~ measuring the output current of a ~~power module (Power~~
~~Semiconductor Module)~~ by measuring the temperature of at least one of an IMS metal path and a
Direct Bonded Copper (DBC) metal path realised in IMS or DBC technology or the like as elongation
of a connection path between power or adduction devices towards outside and for compensating the
voltage drop due to thermal drift of metal path resistivity through software computation and then
having the exact phase current measure.